

FORM HDP-1449 (Based on Form PTO-1449)

**PATENT AND TRADEMARK OFFICE
INFORMATION DISCLOSURE CITATION**

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Sheet 1 of 6

ATTORNEY DOCKET NO.

SERIAL NO.

4981-000011/NP

10/539,634

APPLICANT

Leon Carlock et al.

FILING DATE

GROUP

December 9, 2005

1649

U.S. PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
1.	ICYWI	5,242,798	09/07/1993	Sutcliffe		

FOREIGN PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/ Subclass	Translation Yes	No
1.	ICYWI	EP 0684310	11/29/1995	EPO		N/A	
2.	↓	JP 06-211683	08/02/1994	Japan		X	
3.	↓	JP 09-263543	10/07/1997	Japan		X	
4.	ICYWI	WO 96/34622	11/07/1996	WIPO		N/A	

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
1.	ICYWI	Baumgartner et al. (1999). Molecular analysis of the porcine proteolipid protein (PLP) gene. Mamm Genome. 10: 895-899
2.	↓	Baumgartner et al. (2000). Structural analysis and transcript processing of the bovine proteolipid protein (PLP) gene. DNA Sequence. 10(6): 379-385
3.	↓	Bizzozero et al. (2002). Mass- spectrometric analysis of myelin proteolipids reveals new features of this family of palmitoylated membrane proteins. J Neurochem. 81: 636-645
4.	↓	Blesch et al. (2002). Neurotrophic factors, gene therapy, and neural stem cells for spinal cord repair. Brain Res Bull. 57(6): 833-838
5.	↓	Boison et al. (1995). Adhesive properties of proteolipid protein are responsible for the compaction of CNS myelin sheaths. J Neurosci. 15(8): 5502-5513
6.	↓	Bongarzone et al. (2001). Differential sensitivity in the survival of oligodendrocyte cell lines to overexpression of myelin proteolipid protein gene products. J Neurosci Res 65: 485-492
7.	ICYWI	Boucher et al. (2002). Proteolipid protein gene modulates viability and phenotype of neurons. J Neurosci. 22 (5): 1772-1783

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OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
8.	/CYW/	Burne et al. (1996). Glial cells are increased proportionally in transgenic optic nerves with increased numbers of axons. J Neurosci. 16(6): 2064-2073
9.		Campagnoni et al. (1994). Isolation and characterization of a cDNA encoding the zebra finch myelin proteolipid protein. Neurochem Res. 19(8): 1061-1065
10.		Casaccia-Bonnet (2000). Cell death in the oligodendrocyte lineage: a molecular perspective of life/death decisions in development and disease. Glia. 29: 124-135
11.		De Louw et al. (2002). Developmental apoptosis in the spinal cord white matter in neonatal rats. Glia. 37: 89-91
12.		Dickinson et al. (1996). Oligodendrocyte progenitors in the embryonic spinal cord express DM-20. Neuropathol Appl Neurobiol. 22: 188-198
13.		Diehl et al. (1986). Individual exons encode the integral membrane domains of human myelin proteolipid protein. Proc Natl Acad Sci USA. 83: 9807-9811
14.		Du et al. (2002). Oligodendrocytes as providers of growth factors. J Neurosci Res. 68: 647-654
15.		Edgar et al. (2002). Survival of, and competition between, oligodendrocytes expressing different alleles of the Plp gene. J Cell Biol. 158(4): 719-729
16.		Garbern (2007). Pelizaeus-Merzbacher disease: genetic and cellular pathogenesis. Cell Mol Life Sci 64: 50-65
17.		Gow et al. (1997). Conservation of topology, but not conformation, of the proteolipid proteins of the myelin sheath. J Neurosci. 17(1): 181-189
18.		Gudz et al. (2002). Myelin proteolipid protein forms a complex with integrins and may participate in integrin receptor signaling in oligodendrocytes. J Neurosci. 22(17): 7398-7407
19.		Hudson et al. (1987). Aberrant splicing of proteolipid protein mRNA in the dysmyelinating jimpy mutant mouse. Proc Natl Acad Sci USA. 84: 1454-1458
20.		Inoue et al. (1996). Cell death of oligodendrocytes or demyelination induced by overexpression of proteolipid protein depending on expressed gene dosage. Neurosci Res. 25: 161-172
21.		Jung et al. (1996). Monoclonal antibody O10 defines a conformationally sensitive cell-surface epitope of proteolipid protein (PLP): evidence that PLP misfolding underlies dysmyelination in mutant mice. J Neurosci. 16(24): 7920-7929
22.	/CYW/	Klugmann et al. (1997). Assembly of CNS myelin in the absence of proteolipid protein. Neuron. 18: 59-70

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OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
23.	/CYW/	Knapp et al. (1999). Programmed cell death without DNA fragmentation in the jimpy mouse: secreted factors can enhance survival. Cell Death Differ. 6: 136-145
24.		Laursen et al. (1984). The structure of bovine myelin proteolipid and its organization in myelin. Proc Natl Acad Sci USA. 81: 2912-2916
25.		Le Bras et al. (2005). Oligodendrocyte development in the embryonic brain: the contribution of the PLP lineage. Int J Dev Biol 49: 209-220
26.		Lees et al. (1983). Amino acid sequence of bovine white matter proteolipid. Arch of Bioc and Biop. 226(2): 643-656
27.		Lepage et al. (1986). Purification and characterization of minor brain proteolipids: use of fast atom bombardment-mass spectrometry for peptide sequencing. Biochimie. 68: 669-686
28.		Limón et al. (1997). High-titer retroviral vectors containing the enhanced green fluorescent protein gene for efficient expression in hematopoietic cells. Blood 90(9): 3316-3321.
29.		Liu et al. (2000). Embryonic stem cells differentiate into oligodendrocytes and myelinate in culture and after spinal cord transplantation. Proc Natl Acad Sci USA. 97(11): 6126-6131
30.		Macklin et al. (1987). Structure and expression of the mouse myelin proteolipid protein gene. J Neurosci Res. 18: 383-394
31.		Macklin et al. (1990). Structure and expression of the mouse myelin proteolipid protein gene. Annals New York Acad Sci 605(1): 183-193
32.		McLaughlin et al. (2002). Evidence for possible interactions between PLP and DM20 within the myelin sheath. Glia. 39: 31-36
33.		Milner et al. (1985). Nucleotide sequences of two mRNAs for rat brain myelin proteolipid protein. Cell. 42: 931-939
34.		Nadon et al. (1994). A combination of PLP and DM20 transgenes promotes partial myelination in the jimpy mouse. J Neurochem. 63: 822-833
35.		Nadon et al. (1990). A point mutation in the proteolipid protein gene of the 'shaking pup' interrupts oligodendrocyte development. Development 110: 529-537
36.	↓	Nadon et al. (1997). Myelin proteolipid DM20: evidence for function independent of myelination. Int J Dev Neurosci. 15(3): 285-293
37.	/CYW/	Nakao et al. (1995). Expression of proteolipid protein gene is directly associated with secretion of a factor influencing oligodendrocyte development. J Neurochem. 64: 2396-2403

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OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
38.	ICYW/	Nave et al. (1987). Splice site selection in the proteolipid protein (PLP) gene transcript and primary structure of the DM-20 protein of central nervous system myelin. Proc Natl Acad Sci USA. 84: 5665-5669
39.		Okano (2002). Stem cell biology of the central nervous system. J Neurosci Res. 69: 698-707
40.		Roy et al. (2000). Promoter-targeted selection and isolation of neural progenitor cells from the adult human ventricular zone. J Neurosci Res. 59: 321-331.
41.		Schliess et al. (1991). Evolution of the myelin integral membrane proteins of the central nervous system. Biol Chem. 372: 865-874
42.		Schweitzer et al. (2006). Evolution of myelin proteolipid proteins: gene duplication in teleosts and expression pattern divergence. Mol Cell Neurosci. 31: 161-177
43.		Sinoway et al. (1994). Tissue lipoproteins revisited: new proteolipid protein gene family members in elasmobranchs. Neurochem Res. 19(8): 1047-1054
44.		Skoff (1982). Increased proliferation of oligodendrocytes in the hypomyelinated mouse mutant-jimpy. Brain Research. 248: 19-31.
45.		Skoff et al. (2004) The myelin proteolipid protein genes modulates apoptosis in neural and non-neural tissues. Cell Death Diff. 11: 1247-1257
46.		Skoff et al. (2004). Analyses of proteolipid protein mutants show levels of proteolipid protein regulate oligodendrocytes number and cell death in vitro and in vivo. Neurochem Res. 29(11): 2095-2103
47.		Smith et al. (1984). Structure of the proteolipid protein extracted from bovine central nervous system myelin with nondenaturing detergents. J Neurochem. 42(2): 306-313
48.		Stecca et al. (2000). The evolution of lipophilin genes from invertebrates to tetrapods: DM-20 cannot replace proteolipid protein in CNS myelin. J Neurosci. 20(11): 4002-4010
49.		Tang et al. (1996). Cloning and expression of the proteolipid protein DM20 cDNA from the brain of the rainbow trout, Oncorhynchus mykiss. Brain Res Mol Brain Res. 41: 134-139
50.	↓	Timsit et al. (1992). DM-20 mRNA is expressed during the embryonic development of the nervous system of the mouse. J Neurochem. 58: 1172-1175
51.	ICYW/	Tohyama et al. (2000). Phylogenetic relation of lungfish indicated by the amino acid sequence of myelin DM20. Mol Brain Res. 80: 256-259

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Ref. Desig.	Examiner's Initials	
52.	ICYW	Tohyama et al. (1999). Gene structure and amino acid sequence of Latimeria chalumnae (coelacanth) myelin DM20: phylogenetic relation of the fish. Neurochem Res. 24(7): 867-873
53.		Tosic et al. (1997). Intracellular transport of the DM-20 bearing shaking pup (shp) mutation and its possible phenotypic consequences. J Neurosci Res. 50:844-852
54.		Tosic et al. (1994). Paralytic tremor (pt): a new allele of the proteolipid protein gene in rabbits. J Neurochem. 63: 2210-2216
55.		Trapp et al. (1997). Differentiation and death of premyelinating oligodendrocytes in developing rodent brain. J Cell Biol. 137(2): 459-468
56.		Venkatesh et al. (2001). Molecular synapomorphies resolve evolutionary relationships of extant jawed vertebrates. Proc Natl Acad Sci. 98(20):11382-11387
57.		Vermeesch et al. (1990). Death of individual oligodendrocytes in jimpy brain precedes expression of proteolipid protein. Int J Dev Neurosci 12: 303-315
58.		Wahle et al. (1998). Cotranslational integration of myelin proteolipid protein (PLP) into the membrane of endoplasmic reticulum: analysis of topology by glycosylation scanning and protease domain protection assay. Glia 24: 226-235
59.		Whikehart et al. (1973). Amino and carboxyl-terminal amino acids of proteolipid proteins. J Neurochem. 20: 1303-1315
60.		Wiggins et al. (1974). NH ₂ -terminal analysis of Wolfgram and Folch-Lees proteolipid proteins. J Neurochem. 22: 337-340
61.		Wu et al. (1997). Novel green fluorescent protein (GFP) baculovirus expression vectors. Gene 190: 157-162.
62.		Yamada et al. (1999). Proteolipid protein gene product can be secreted and exhibit biological activity during early development. J Neurosci. 19(6): 2143-2151
63.		Yamada et al. (2001). Mutant PLP/DM20 cannot be processed to secrete PLP-related oligodendrocyte differentiation/survival factor. Neurochem Res. 26(6): 639-645
64.		Yamaguchi et al. (1996). Myelin proteolipid protein (PLP), but not DM-20, is an inositol hexakisphosphate-binding protein. J Biol Chem. 271(44): 27838-27846
65.	✓	Yang et al. (1997). Proteolipid protein regulates the survival and differentiation of oligodendrocytes. J Neurosci. 17(6): 2056-2070
66.	ICYW	Yin et al. (2006). Evolution of a neuroprotective function of central nervous system myelin. J Cell Biol 172(3): 469-478

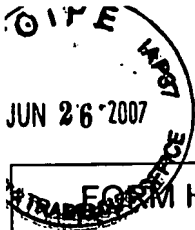
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OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)		
Ref. Desig.	Examiner's Initials	
67.	/CYW/	Yool et al. (2001). Myelin proteolipid proteins promote the interaction of oligodendrocytes and axons. J Neurosci Res. 63: 151-164

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